Claims

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claims 1-21 (cancelled).

Claim 22 (withdrawn - currently amended) The method of claim ~~21~~ 38, wherein said antagonist comprises an antibody that binds to said 1,25-$(OH)_2$-D receptor.

Claim 23-24 (cancelled).

Claim 25 (withdrawn) The method of claim 38, comprising modulating, attenuating, or decreasing obesity in an individual comprising the administration of a 1, 25-dihydroxyvitamin D (1,25-(OH)2-D) antagonist.

Claim 26 (withdrawn) The method of claim 25, wherein said 1, 25-dihydroxyvitamin D (1,25-(OH)2-D) antagonist is an antibody that binds to 1,25-(OH)2-D.

Claim 27 (withdrawn) The method of claim 25, wherein said 1, 25-dihydroxyvitamin D (1,25-(OH)2-D) antagonist is a chemical compound that binds to 1,25-(OH)2-D.

Claim 28 (cancelled).

Claim 29 (withdrawn) The method of claim 25, wherein said antagonist comprises one or more soluble 1,25-(OH)2-D receptors.

Claims 30-34 (cancelled).

Claim 35 (currently amended) The method of claim 38 ~~21~~, wherein the individual has Grade I obesity.

Claim 36 (currently amended) The method of claim 38 ~~21~~, wherein the individual has Grade II obesity.

Claim 37 (currently amended) The method of claim 38 ~~21~~, wherein the individual has Grade III obesity.

Claim 38 (currently amended) A method of regulating body weight comprising administering to an individual ~~regulating body weight~~ in need thereof an antagonist of calcitrophic hormone (1,25-$(OH)_2$-D) activity selected from the group consisting of 1-β, 25-dihydroxyvitamin D, a homolog of 1-β, 25-dihydroxyvitamin D, and an isomer of 1-β, 25-dihydroxyvitamin D~~, and calcium~~, in an amount effective to block calcitrophic hormone (1,25-$(OH)_2$-D) activity in adipocytes of said individual, and increase intracellular calcium, said antagonist inducing weight loss, and/or increasing metabolic consumption of adipose tissue.

Claim 39-40 (cancelled)

Claim 41 (previously presented) The method of claim 38, wherein said antagonist is 1-β, 25-dihydroxyvitamin D.

Claim 42 (withdrawn) The method of claim 38, wherein the antagonist comprises a 1,25-(OH)2-D antagonist selected from the group consisting of an antibody that binds to said 1,25-(OH)2-D, a chemical compound that binds to said 1,25-(OH)2-D, one or more soluble 1,25-(OH)2-D receptors, 1,25-(OH)2-D neutralizing antibodies; soluble 1,25-(OH)2-D receptor; fusion proteins

comprising the 1,25-(OH)2-D receptor; and compounds comprising calcium.

Claim 43-45 (cancelled)

Claim 46 (withdrawn) The method of claim 45, comprising administering over a prolonged period a dietary supplement comprising calcium, a foodstuff supplemented with calcium, or another food high in calcium.

Claim 47 (withdrawn) The method of claim 46, wherein the prolonged period is at least about one month.

Claim 48 (withdrawn) The method of claim 47, wherein said dairy product is milk, yogurt, and/or cheese.

Claim 49 (withdrawn) The method of claim 38, wherein said administration comprises administering a dairy product.

Claim 50 (previously presented) The method of claim 38, wherein the antagonist is contained in a liquid.

Claim 51 (withdrawn) The method of claim 50, wherein the liquid is supplemented with calcium.

Claim 52 (withdrawn) The method of claim 38, wherein said antagonist is contained in food for a non-human animal.

Claim 53 (withdrawn) The method of claim 38, wherein the antagonist blocks the action of 1,25-(OH)2-D in adipocytes.

Claim 54 (withdrawn) The method of claim 38, wherein the administering decreases the levels of calcitrophic hormones in the adipocytes.

Claim 55 (previously presented) The method of claim 38, wherein the calcitrophic hormone activity in adipocytes that is blocked is selected from one or more of inhibiting lipolysis, stimulating lipogenesis, increasing adiposity, stimulating triglyceride accumulation, increasing intracellular calcium concentration ($[Ca^{2+}]_i$), inhibiting adipocyte uncoupling protein 2 (UCP2) expression and/or stimulating fatty acid synthase (FAS) activity.

Claim 56 (previously presented) The method of claim 38, wherein the antagonist reduces the risk of an obesity related health problem selected from the group consisting of coronary artery disease, stroke, diabetes, osteoarthritis, ligament injuries, perineal dermatitis, diabetes mellitus, cardiomyopathy, and urologic syndrome.

Claim 57 (previously presented) The method of claim 38, wherein the individual is a human.

Claim 58 (previously presented) The method of claim 38, wherein the individual is a non-human animal.

Claim 59 (withdrawn) The method of claim 38, wherein the antagonist stimulates lipolysis and inhibits lipogenesis.

Claim 60 (withdrawn) The method of claim 38, wherein the antagonist blocks calcitrophic hormone induced inhibition of lipolysis in adipocytes.

Claim 61 (previously presented) The method of claim 38, wherein the antagonist suppresses adiposity, inhibits triglyceride accumulation, reduces intracellular calcium

concentration ($[Ca^{2+}]_i$), increases adipocyte uncoupling protein 2 (UCP2) expression, increases core temperature, accelerates weight loss and fat mass reduction in an individual under caloric restriction, and/or prevents stimulation of fatty acid synthase (FAS) activity.

Claim 62 (withdrawn) The method of claim 38, wherein the antagonist suppresses adiposity and inhibits triglyceride accumulation by stimulating lipolysis and inhibiting lipogenesis.

Claim 63 (previously presented) The method of claim 38, wherein the antagonist suppresses or decreases intracellular calcium concentration ($[Ca^{2+}]_i$).

Claim 64 (withdrawn) The method of claim 38, wherein the antagonist increases adipocyte uncoupling protein 2 (UCP2) expression.

Claim 65 (withdrawn) The method of claim 38, wherein the antagonist increases core temperature.

Claim 66 (withdrawn) The method of claim 38, wherein the antagonist induces a metabolic state in which the energy metabolism is shifted from energy storage to energy expenditure.

Claim 67 (withdrawn) The method of claim 38, wherein the antagonist accelerates weight loss and/or fat mass reduction in an individual under caloric restriction.

Claim 68 (withdrawn) The method of claim 38, wherein the antagonist prevents calcitrophic hormone stimulation of fatty acid synthase (FAS) activity.

Claims 69-79 (cancelled)

Claim 80 (currently amended) A method of regulating body weight comprising administering to an individual in need thereof ~~regulating body weight two~~ antagonists of calcitrophic hormone ($1,25\text{-}(OH)_2\text{-}D$) activity selected from the group consisting of 1-β, 25-dihydroxyvitamin D, a homolog of 1-β, 25-dihydroxyvitamin D, and an isomer of 1-β, 25-dihydroxyvitamin D~~, and calcium~~, in an amount effective to block calcitrophic hormone ($1,25\text{-}(OH)_2\text{-}D$) activity in adipocytes of said individual and increase intracellular calcium, and ~~said antagonist resulting in~~ said

antagonist inducing weight loss, and/or increasing metabolic consumption of adipose tissue.